



POWER PLANT – EEC CHANNEL A AND B – INTRODUCTION OF REVISED ENGINE DEDICATED ALTERNATOR
CONNECTORS – NEW PRODUCTION – CATEGORY CODE 7 – MOD.ENG-71-0200

1. Planning Information

A. Effectivity

- (1) Aircraft: (a) McDonnell Douglas MD-90
- (2) Engines: (a) V2525-D5 Engines prior to Serial No.V20154
(b) V2528-D5 Engines prior to Serial No.V20154

B. Concurrent Requirements

None.

C. Reason

(1) Condition

The Engine Dedicated Alternator pin connectors can burn. The problem is caused by the locking of the stator connector for Looms A and B which is not sufficient.

Chaffing of the wire at the elbow of the 90 degree backshell can result in unwanted fault messages.

(2) Background

These problems have occurred in-service.

(3) Objective

The purpose of this Service Bulletin is to maintain reliability.

(4) Substantiation

The changes contained in this Service Bulletin have been the subject of satisfactory engineering analysis. Also, the standard of connector in this Service Bulletin is installed on V2500 A5 and D5 models which are in-service.

(5) Effect of Bulletin on Workshop Procedures

V2500-ENG-71-0200



SERVICE BULLETIN

Removal/Installation	Not affected
Disassembly/Assembly	Not affected
Cleaning	Not affected
Inspection/Check	Not affected
Repair	Not affected
Testing	Not affected

(6) Supplemental Information

None.

D. Description

(1) The changes contained in this Service Bulletin are as follows:

(a) The EEC harness assemblies (Looms A and B) has changed as follows:

- (i) The connector at position P1-8024 (Loom A) and P1-8017 (Loom B) has changed. They have a finer locking mechanism to prevent "Backing-off". The quantity of the contact pins has increased from 10 to 12.
- (ii) The contact sockets have changed so that they connect correctly with pins of the new connector. The quantity of the sockets has increased from 10 to 12.
- (iii) The sealing plugs have changed to make the connector lock better. The quantity of the plugs has increased from two to four.
- (iv) The backshell of connectors P1-8024 (Loom A) and P1-8017 (Loom B) have changed from a straight standard to a right-angle standard.
- (v) The length of the EDA limb of the Loom A has increased to give a better radius and "drip-loop" of cable.
- (vi) The length of the EDA limb and the fire-wire limb (B20) of Loom B has decreased to give a better routing of the harness.

(b) Clip points CP2344 and CP2346 have changed.

(c) Clip points CP2122 and CP2684 are deleted.

E. Approval

The part changes and/or part modification are given in Section 2 and 3 of this Service Bulletin. They obey the applicable Federal Aviation Regulations and are FAA-APPROVED for the Engine Model Listed.

V2500-ENG-71-0200

**F. Compliance**

Category Code 7.

This Service Bulletin can be done when there are no initial parts remaining.

G. Manpower

Estimate of man-hours necessary to do this Service Bulletin in full:

Venue	Estimated Man-hours
(1) In service	Not applicable
(2) At overhaul	No more time is necessary to do this Service Bulletin.

NOTE: The parts affected by this Service Bulletin are accessible at overhaul.

H. Material – Price and Availability

(1) A Modification kit is not necessary.

(2) See "Material Information" section for prices and availability of spares

I. Tooling – Price and Availability

Special tools are not necessary.

J. Weight and Balance

(1) Weight change	None
(2) Moment Arm	No Effect
(3) Datum	Engine Front Mount Centreline. (Power Plant Station – PPS 100)

K. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

L. References

(1) Internal Reference No.

EC96VR035A

(2) Other References



The IAE V2500 modification that follows must be installed at the same time as this Service Bulletin:

ENG-73-0096 Engine Fuel and Control – Dedicated Alternator (Stator) – Introduction of revised receptacles

The IAE V2500 Service Bulletins that follow are replaced by this Service Bulletin:

ENG-73-0092 Power Plant – EEC Channel A and B harness (Loom A and B) – Engine dedicated alternator Harness connectors with improved locking feature

ENG-71-0182 Power Plant – EEC Channel A and B Harnesses (Loom A and B) – Introduction of revised engine dedicated alternator connectors

ENG-71-0176 Power Plant – EEC Channel A and B Harness (Loom A and B) – Introduction of alternative plug assemblies

M. Other Publications Affected

- (1) Illustrated Parts Catalog (IPC), Chapter/Sections: 71-51-51, 71-51-52, 71-51-53, 71-51-54, 71-51-55, 71-51-56 and 71-51-59.
- (2) The V2500 Engine Manual (EM), Chapter/Section, 72-00-60.
- (3) The MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section, 71-51-51, 71-51-54 and 71-51-57.



2. Accomplishment Instructions

A. Rework Instructions

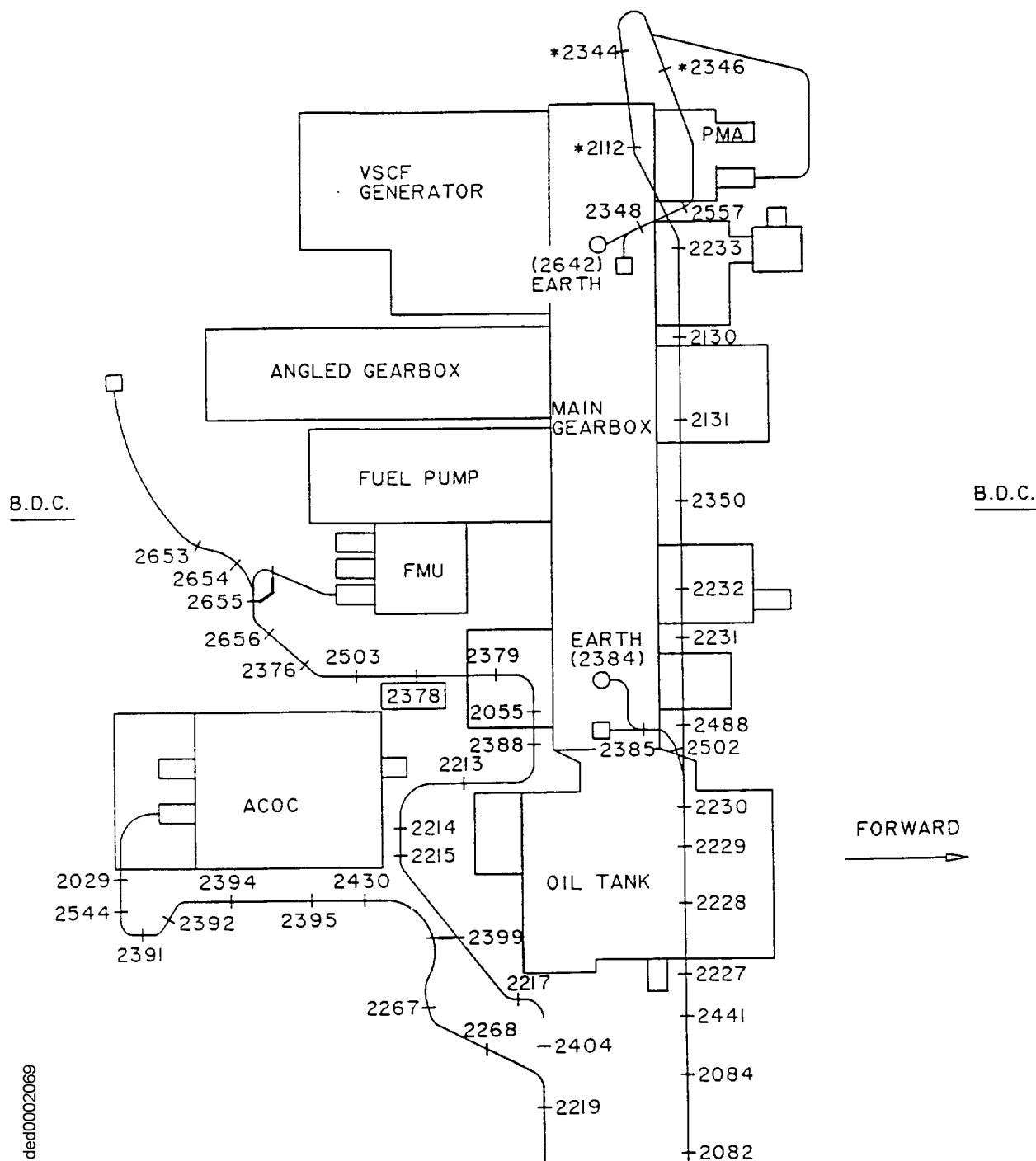
None.

B. Assembly Instructions

For the correct procedures refer to the V2500-D5 Engine Manual (EM), Chapter/Section, 72-00-60 or the MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section 71-51-51 and 71-51-54.

C. Recording Instructions

A record of accomplishment is necessary.



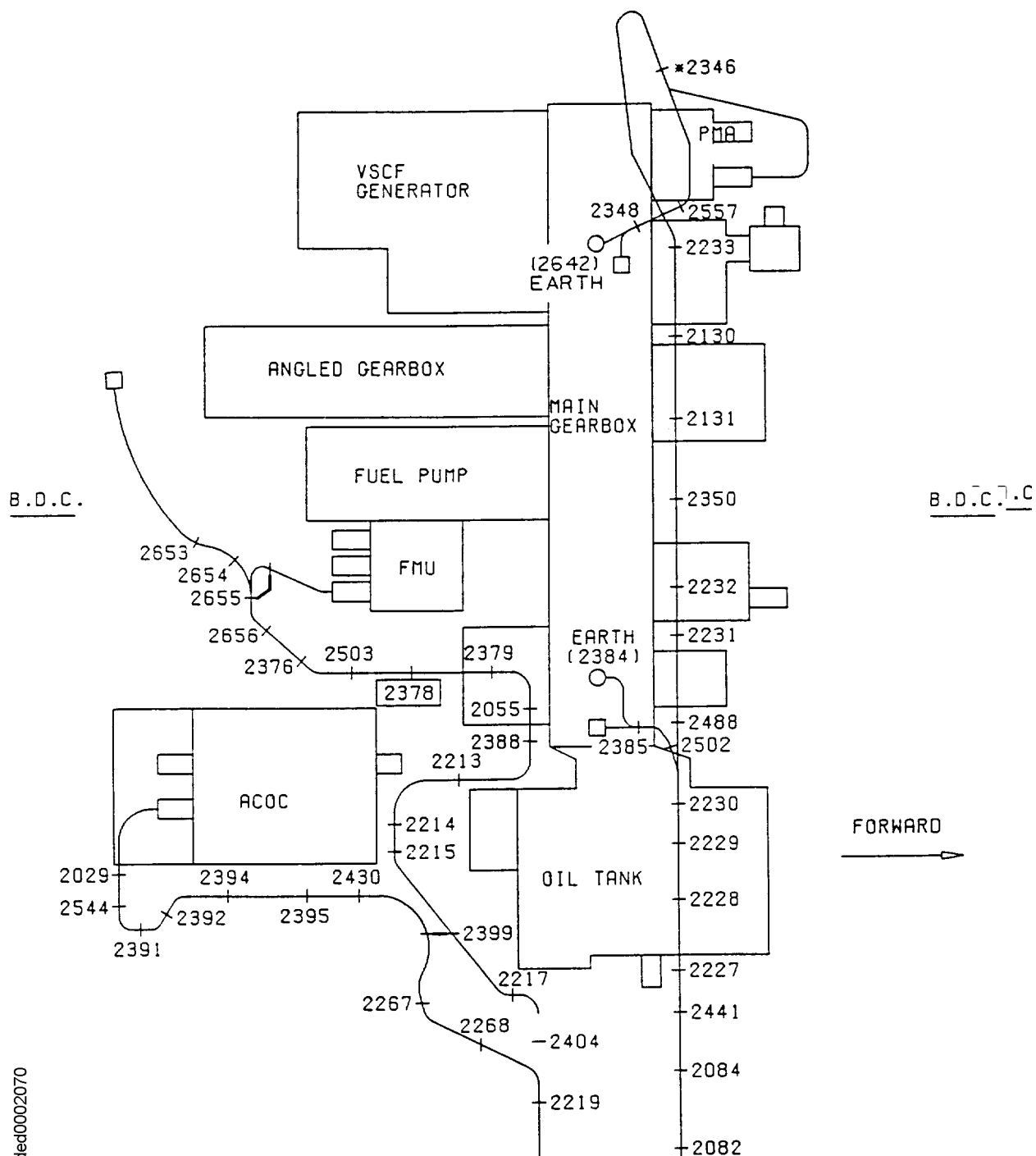
Schematic view of part of Loom B - Before change
Fig.1

V2500-ENG-71-0200

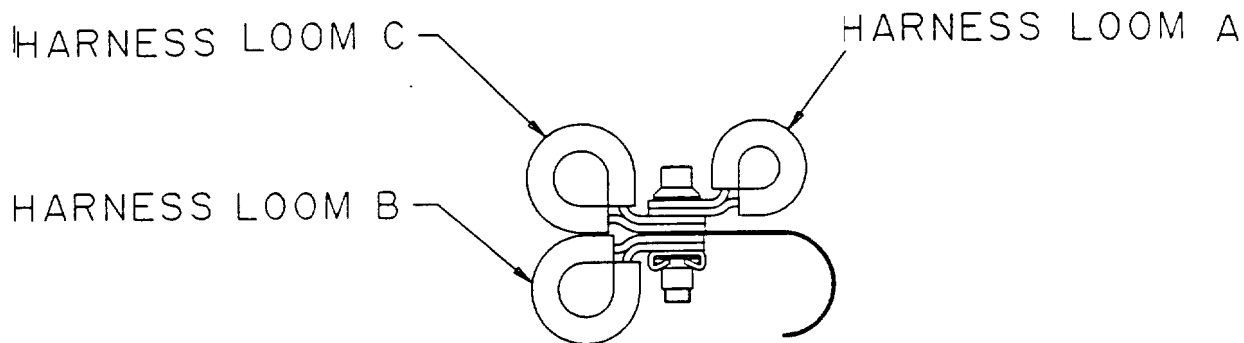


SERVICE BULLETIN

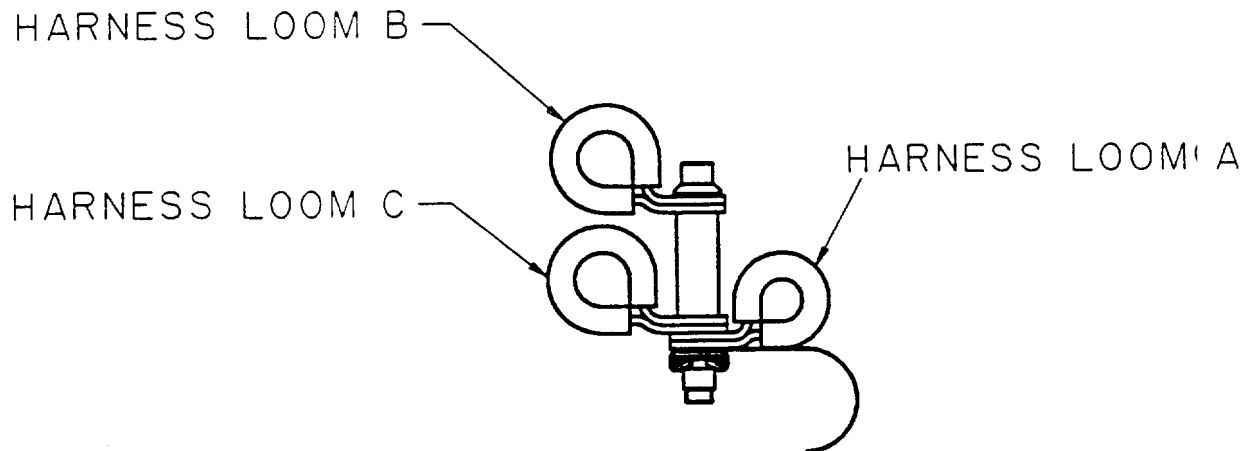
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Schematic view of part of Loom B - After change
Fig.2

V2500-ENG-71-0200



SCHEMATIC VIEW OF CLIP
POINT 2346 BEFORE CHANGE



Clip point 2346 - Before and after change
Fig.3

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SERVICE BULLETIN

3. Material Information

Applicability: For each V2500 Engine to incorporate this Bulletin.

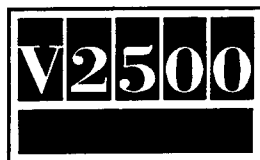
A. Kits associated with this Bulletin:

None

B. Parts affected by this Bulletin:

New Part No. (ATA No.)	Qty	Est'd Unit Price (\$)	Keyword	Old Part No. (IPC No.)	Instructions Disposition
6A6544 (71-51-51)	1	35360.00	Harness Assy - Fan case EEC channel A - Loom A	6A6459 (01-005)	(A)(B)(S1)
4W0109 (71-51-51)	1	4.43	Bolt, machine double hex (.190 dia x .875) (CP2344)	AS20914 (01-309)	(A)(S2)(1D)
AS62504 (71-51-51)	1	8.87	Clamp, loop, style, cushion (.250 dia) (CP2344)	AS62505 (01-312)	(A)(S1)(1D)
4W0116 (71-51-51)	1	12.40	Bolt, machine double hex (.190 dia x .1312) (CP2346)	AS20909 (01-317)	(A)(S1)(1D)
AS62501 (71-51-51)	1	8.43	Clamp, loop, style, cushion (0.062 dia) (CP2346)	AS62502 (01-320)	(A)(S1)(1D)
UP10481 (71-51-51)	1	13.20	Spacer (20mm) (CP2346)	- (01-322)	(A)(C)
- (71-51-51)	1		Bolt, bihex hd (.190 dia x 1.125) (CP2684)	AS20918 (02-241)	(F)(1D)
- (71-51-51)	1		Spacer (10mm) (CP2684)	UP10479 (01-246)	(F)(1D)
- (71-51-51)	1		Nut, self locking dbl hex (.190 dia) (CP2684)	4W0001 (02-248)	(F)(1D)
- (71-51-51)	1		Clip (1.125 dia) (CP2684)	AS62418 (02-252)	(F)(1D)

V2500-ENG-71-0200

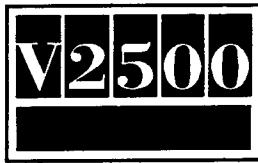


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ESC10SE 61212SNO (71-51-51)	1	Quote	Connector	T3K1213- 98SN (04-260)	(A)(E)(J) (S1)(1D)
- (71-51-51)	Ref		Plug assy	MT938T13 K98S (04-260)	(E)(F)(1D)
ESC30S20BC (71-51-51)	2	2.22	Contact, socket	T3-4120- 36LD (04-268)	(A)(E)(J) (S1)(1D)(2D)
- (71-51-51)	Ref		Contact, socket	5100-101- 0120 (04-268)	(E)(F)(1D)
ESC65E12 (71-51-51)	1	136.00	Clamp, backshell	388HH104 E13 (04-275)	(A)(E)(J) (S1)(1D)
- (71-51-51)	Ref		Clamp, backshell assy	92H3-13- 8JCCAD (04-275)	(E)(F)(1D)
- (71-51-51)	Ref		Clamp, backshell assy	273E13 (04-275)	(E)(F)(1D)
- (71-51-51)	Ref		Backshell assy	388HH104 D13 (04-275)	(E)(F)(1D)
- (71-51-51)	Ref		Backshell assy	92H3-13- 4ECCAD (04-275)	(E)(F)(1D)
- (71-51-51)	Ref		Backshell assy	273D13 (04-275)	(E)(F)(1D)
ESC36-20 (71-51-51)	2	Quote	Plug, sealing	T3-4020- 59L (04-988)	(A)(E)(J) (S1)(1D)83D)
- (71-51-51)	Ref		Plug, sealing	3400-043- 0020 (04-988)	(E)(F)(1D)
6A6544 (71-51-52)	Ref	35360.00	Harness assy - Fan case EEC channel A - Loom A	6A6459 (01-005)	(A)(B)(G) (S1)

V2500-ENG-71-0200



SERVICE BULLETIN

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6A6544 (71-51-53)	Ref	35360.00	Harness assy - Fan case EEC channel A Loom A	6A6459 (01-005)	(A)(B)(G) (S1)
6A6545 (71-51-54)	1	35360.00	Harness assy - Fan case EEC channel B - Loom B	6A6460 (01-005)	(A)(B)(S1)
- (71-51-54)	1		Bolt, bihex hd (.190 dia x .875) (CP2112)	AS20914 (01-569)	(F)(1D)
- (71-51-54)	1		Clamp, loop, style, cushion (.312 dia) (CP2112)	AS62505 (01-572)	(F)(1D)
- (71-51-54)	1		Spacer (10mm) (CP2112)	UP10479 (01-574)	(F)81D)
- (71-51-54)	1		Nut, self locking dbl hex (.190 dia) (CP2112)	4W0001 (01-576)	(F)(1D)
AS62505 (71-51-54)	1		Clamp, loop, style, cushion (.312 dia) (CP2346)	AS62502 (01-580)	(A)(S1)(1D)
- (71-51-54)	1		Clip (1.125 dia)(CP2684)	AS62418 (01-900)	(F)(1D)
ESC10SE 61212S60 (71-51-54)	1	9.06	Connector	T3K1213- 98SA (04-085)	(A)(E)(K) (S1)
- (71-51-54)	Ref		Plug assy	MT938T13 K98SA (04-085)	(E)(F)
ESC30S20BC (71-51-54)	2	2.22	Contact, socket	T3-4120- 36LD (04-093)	(A)(E)(K) (S1)(1D)(2D)
- (71-51-54)	Ref	2.22	Contact, socket	5100-101- 0120 (04-093)	(E)(F)(1D)
ESC65E12 (71-51-54)	1	136.00	Clamp, backshell	388HH104 E13 (04-100)	(A)(E)(K) (S1)
- (71-51-54)	Ref		Clamp, backshell assy	92H3-13- 8JCCAD (01-100)	(E)(F)

V2500-ENG-71-0200



SERVICE BULLETIN

- (71-51-54)	Ref		Clamp, backshell assy	273E13 (04-100)	(E)(F)
- (71-51-54)	Ref		Backshell assy	388HH104 D13 (04-100)	(E)(F)
- (71-51-54)	Ref		Backshell assy	92H3-13- 4ECCAD (04-100)	(E)(F)
- (71-51-54)	Ref		Backshell assy	273D13 (04-100)	(E)(F)
ESC36-20 (71-51-54)	2	Quote	Plug, sealing	T3-4020- 59L (04-983)	(A)(E)(K) (S1)(1D)(3D)
- (71-51-54)	Ref		Plug, sealing	3400-043- 0020 (04-983)	(E)(F)(1D)
6A6545 (71-51-55)	Ref		Harness assy - Fan case EEC channel B - Loom B	6A6460 (01-005)	(A)(B)(H) (S1)
6A6545 (71-54-56)	Ref		Harness assy - Fan case EEC channel B - Loom B	6A6460 (01-005)	(A)(B)(H) (S1)
AS62505 (71-51-59)	1	9.06	Clamp, loop, style, cushion (.312 dia) (CP2344)	AS62511 (01-176)	(A)(S1)(1D)

NOTE: The 1997 unit prices shown are an estimate and they are given for the purpose of planning only. For information about actual prices, refer to the IAE Price Catalog or contact IAE's Spare Parts Sales Department.

C. Instructions Disposition Codes

- (A) New part is currently available.
- (B) Old part will be discontinued.
- (C) Additional part.
- (E) Alternatives.
- (F) Redundant Part.
- (G) Reference at this position, see ATA 71-51-51, Fig Item 01-005.
- (H) Reference at this position, see ATA 71-51-54, Fig Item 01-005.
- (J) Part of harness assembly at ATA 71-51-51, Fig Item 01-005.
- (K) Part of harness assembly at ATA 71-51-54, Fig Item 01-005.
- (S1) Old and new parts are not interchangeable.
- (S2) Old and new parts are freely and fully interchangeable.
- (1D) Old part can be used up on other applications.
- (2D) Quantity increased from 10 off to 12 off.

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International Aero Engines

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(3D) Quantity increased from 2 off to 4 off.

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V2500-ENG-71-0200

Jul.18/97

Page 13

